UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION

SCALE VIDEO CODING LLC	§	
	§	
v.	§	CIVIL NO. 4:23-CV-803-SDJ
	§	
CISCO SYSTEMS, INC.	§	

MEMORANDUM OPINION AND ORDER

Before the Court is Defendant Cisco Systems, Inc.'s ("Cisco") Motion to Dismiss. (Dkt. #44). After the motion was fully briefed, (Dkt. #50, #57, #59), the Court held a hearing on the motion, (Dkt. #64). Having considered the motion, the related filings, the arguments presented by the parties, and the relevant law, the Court concludes that the motion should be **DENIED**.

I. BACKGROUND

A. The Patented Technology

Scale Video Coding LLC ("SVC") contends that Cisco infringes U.S. Patent No. 11,019,372 (the "'372 Patent"), which is titled "Layered Multicast and Fair Bandwidth Allocation and Packet Prioritization." The '372 Patent focuses on a "one-to-many communication" system called "multicasting," which is capable of "send[ing] data packets from a data source to more than one receiver" over "a network." '372 Patent at 3:6–9. Problems arise with multicasting when the flow of data exceeds the network's capacity—a condition called "congestion"—and the receiver must decide which packets to accept or drop. *Id.* at 5:8–10.

No matter which data packets are dropped, the data stream will be degraded. Depending on the type of information being streamed, the degree of degradation may vary. For example, if too many packets are dropped, a stream may become corrupted. *Id.* at 2:15–20. By contrast, if only a few packets are lost, the quality of the stream may decrease only slightly. *Id.* Either way, this packet loss often flows from receivers having different "bandwidths"—i.e., different capacities for the flow of information at a given time. *E.g.*, *id.* at 20:65–21:1. So while one receiver may accept a given data stream without packet loss, another receiver may have insufficient bandwidth to accept that same stream.

To address this issue, the '372 Patent teaches "a congestion control system that may prioritize designated layers of data within a data stream over other layers of the same data stream." *Id.* at Abstract. There are two main features of this "congestion control system": (1) an overlay network; and (2) packet prioritization through layering. To increase a network's capacity, an "overlay network" of "software implemented routers" with "virtual connections" can be integrated with a physical network to increase network connections and help "manage[] flow control and timely delivery" of data. *Id.* at 3:27–28, 31–32, 4:6. To further limit congestion, data streams are broken into "layers": the source device encodes a base layer with lower-frame-rate data and one or more enhancement layers with higher-frame-rate data. *Id.* at 21:25–22:2. This layered approach allows receivers to decode only the layers they can support based on their bandwidth constraints, reducing unnecessary transmission of high-quality layers over limited-bandwidth links. *Id.*

A representative claim of the '372 Patent is claim 1:

A video router, comprising:

a memory; and

a processor, wherein the processor executes instructions stored in the memory to cause the video router to:

receive a layered video data stream including a base layer and a set of enhancement layers,

identify bandwidth-limited conditions of an internet protocol network between the video router and a plurality of video receivers,

forward the base layer from the video router to at least two of the plurality of video receivers via the internet protocol network, and

selectively forward one or more of the set of enhancement layers, but fewer than all of the set of enhancement layers, to at least two of the plurality of video receivers through the internet protocol network based upon the identified bandwidth-limited conditions, and wherein the video router transmits the layered video data stream according to an internet protocol;

wherein each layer of the layered video data stream comprises data packets, each of which is encoded with a sequence number and a layer identifier, and wherein the layer identifier for each data packet is based upon a layer to which the packet belongs.

'372 Patent at Claim 1.

A real-world example helps demonstrate the invention in practice. Suppose that you, along with many others, choose to stream the Super Bowl on your laptop. You each pay a fee, and you each receive internet access to the live video feed. Assuming the internet connection between the source and your receiver has sufficient bandwidth, your real-time stream comes through uninterrupted. But if that bandwidth is insufficient, several issues could occur, some being worse than others:

(1) your receiver drops too many packets, causing the stream to pause and requiring you to refresh the page (and your connection); (2) your receiver drops only a few packets, and your high-definition feed degrades to a standard-definition feed; or (3) your receiver drops packets for only a few seconds, you see a few pixelated frames, and the stream then resumes normal operation. Each issue is caused by a bandwidth-limited condition; which one occurs depends on how your receiver handles network congestion. Using the layered approach taught by the '372 Patent, the likely outcome would be the second issue disclosed above: the receiver prioritizes lower-frame-rate data (standard-definition feed) and discards the enhancement layers (higher-definition feed) until the receiver is no longer limited by bandwidth. The result is seamless real-time streaming of the big game.

B. Procedural History

In September 2023, SVC sued Cisco for patent infringement, alleging that Cisco infringes claims 1, 2, 6, 7, 11, and 12 of the '372 Patent ("Asserted Claims"). (Dkt. #1). Only claims 1, 6, and 11 are independent claims. Cisco now moves to dismiss SVC's claims under Federal Rule of Civil Procedure 12(c) for failure to state a claim upon which relief can be granted. (Dkt. #44). Cisco argues that the Asserted Claims of the '372 Patent are not directed to a patentable subject matter under 35 U.S.C. § 101. SVC disagrees, arguing that the claims recite specific improvements to computer networks and multicast streaming. The motion is fully briefed and ripe for review.

II. LEGAL STANDARDS

A. Rule 12(c)

Patent eligibility under 35 U.S.C. § 101 can often be resolved on a motion to dismiss. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018) ("Patent eligibility has in many cases been resolved on motions to dismiss or summary judgment."). A motion for judgment on the pleadings under Rule 12(c) is subject to the same standards as a motion to dismiss under Rule 12(b)(6). *Doe v. MySpace, Inc.*, 528 F.3d 413, 418 (5th Cir. 2008). To survive a 12(b)(6) motion to dismiss, "a complaint must contain sufficient factual matter, accepted as true, to 'state a claim to relief that is plausible on its face.'" *Waller v. Hanlon*, 922 F.3d 590, 599 (5th Cir. 2019) (quoting *Ashcroft v. Iqbal*, 556 U.S. 662, 678, 129 S.Ct. 1937, 173 L.Ed.2d 868 (2009)).

In evaluating plausibility, courts deploy a two-step inquiry. First, courts assess the allegations of the complaint and distinguish well-pleaded factual allegations from unsupported legal conclusions. *Id.* While the complaint need not lay out its factual allegations in significant detail, it must provide enough detail to suggest that the plaintiff's right to recovery is more than just speculative. *See Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555, 127 S.Ct. 1955, 167 L.Ed.2d 929 (2007). Mere "labels and conclusions" or a "formulaic recitation of the elements of a cause of action" are insufficient: courts need not assume the truth of legal conclusions framed as factual allegations. *Id.*

Second, courts must "ask whether the remaining allegations are sufficient to nudge the plaintiff's claim across the plausibility threshold." *Waller*, 922 F.3d at 599 (cleaned up). In other words, assuming the remaining allegations as true, can the Court infer "more than the mere possibility of misconduct." *Id.* (quoting *Iqbal*, 556 U.S. at 679). Making this determination is "a context-specific task that requires the reviewing court to draw on its judicial experience and common sense." *Id.*

B. The *Alice/Mayo* Framework

Section 101 of the Patent Act provides that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." While the scope of patentable inventions is broad, the Supreme Court has long held that Section 101 contains an implicit exception to patent eligibility for claims directed toward laws of nature, physical phenomena, and abstract ideas. *Diamond v. Chakrabarty*, 447 U.S. 303, 309, 100 S.Ct. 2204, 65 L.Ed.2d 144 (1980); *accord Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589, 133 S.Ct. 2107, 186 L.Ed.2d 124 (2013). Relevant here, "[t]he abstract idea exception has been applied to prevent patenting of claims that abstractly cover results where 'it matters not by what process or machinery the result is accomplished.'" *McRO, Inc. v. Bandai Namco Games Am., Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (quoting *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 113, 14 L.Ed. 601 (1853)). In other words, "a patent is not good for an effect, or the result of a certain process because such patents would prohibit all other persons from making

the same thing by any means whatsoever." *Id.* (cleaned up) (quoting *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175, 14 L.Ed. 367 (1853)). Courts must "therefore look to whether the claims . . . focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." *Id.*

The abstract-idea exception "is not without limits" though, "for 'all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas,' and 'too broad an interpretation of this exclusionary principle could eviscerate patent law.'" *Myriad Genetics*, 569 U.S. at 589–90 (quoting *Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 71, 132 S.Ct. 1289, 182 L.Ed.2d 321 (2012)). Thus, "[w]hether a claim recites patent eligible subject matter is a question of law which may contain disputes over underlying facts." *Berkheimer*, 881 F.3d at 1368.

The Supreme Court has established a two-step framework—referred to as the *Alice/Mayo* framework[1]—"for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 217, 134 S.Ct. 2347, 189 L.Ed.2d 296 (2014); *see also Mayo*, 566 U.S. at 77. First, courts must determine whether the claims are directed to a patent-ineligible concept.

[1] *See, e.g.*, Emily G. Blevins & Kevin J. Hickey, CONG. RSCH. SERV., IF12563, Patent-Eligible Subject Matter Reform: An Overview 1–2 (2024) (referring to the "Alice/Mayo framework" throughout).

Alice, 573 U.S. at 217. If so, courts must determine whether the claims include additional elements beyond the patent-ineligible concept that "transform the nature of the claim[s]" into patent-eligible applications. *Id.* (citation omitted). To "determine whether claims are unpatentable under the 'abstract idea' rubric," the Federal Circuit has instructed district courts to review its decisions applying "the two-stage *Mayo/Alice* inquiry." *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258 (Fed. Cir. 2016).

At step 1 of the *Alice/Mayo* framework, a court must determine if the claims are directed to a law of nature, natural phenomenon, or abstract idea. *Alice*, 573 U.S. at 217. "If not, the claims pass muster under § 101." *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 714 (Fed. Cir. 2014). In conducting this inquiry, "the claims are considered in their entirety to ascertain whether their character as a whole is directed to excluded subject matter." *Internet Pats. Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015); *see also Affinity Labs*, 838 F.3d at 1257 (stating that the first step "calls upon us to look at the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a whole' is directed to excluded subject matter").

Courts must take care to not oversimplify key inventive concepts or downplay an invention's benefits. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337–38 (Fed. Cir. 2016). For example, "it is not enough to merely identify a patent-ineligible concept underlying the claim; [courts] must determine whether that patent-ineligible

concept is what the claim is 'directed to.'" *Rapid Litig. Mgmt. v. CellzDirect, Inc.*, 827 F.3d 1042, 1050 (Fed. Cir. 2016).

For software applications, the dichotomy between patentable concrete ideas and unpatentable abstract ideas often turns on whether the patent is directed to "an improvement in the functioning of a computer," which is patentable, or to a method that simply recites "generalized steps to be performed on a computer using conventional computer activity," which is not. *Enfish*, 822 F.3d at 1338 (citing *Alice*, 573 U.S. at 222–26); *see also In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016) (holding that although the claim recited "concrete, tangible components . . . the specification made clear that the recited physical components merely provided a generic environment in which to carry out the abstract idea of classifying and storing digital images in an organized manner" (cleaned up)). Step 1 of the *Alice/Mayo* framework thus hinges on the specificity of the claims and the concreteness of the claimed improvement.[2]

III. DISCUSSION

The Court begins by reviewing for guidance the Federal Circuit's Section 101 decisions on the most analogous technology to the technology at issue here. *Affinity Labs*, 838 F.3d at 1258. As discussed above, the '372 Patent relates to a congestion-control system that improves data-streaming capabilities. To achieve that improvement, this system deploys various algorithms to more efficiently route data

[2] Because the Court decides this motion at *Alice/Mayo* step 1, it need not discuss the contours of step 2.

and to decrease congestion-related issues experienced during real-time streaming. Broadly speaking, then, the '372 Patent concerns an improvement in a computer-implemented process—data streaming—achieved through a specific set of algorithms that more efficiently analyze and transfer data. Therefore, the most analogous cases evaluate claimed improvements in data-streaming processes or technology. Because there are few such cases, the Court also considers cases that consider claimed improvements in computers, computer networks, or computer-implemented processes.

A. Federal Circuit Precedent: Not Directed to Abstract Idea

The Court reviews the three most technologically analogous cases in which the Federal Circuit held that the patents at issue were not directed to an abstract idea: *Contour IP Holdings*, *McRO, Inc.*, and *SRI*. Although the cases vary in procedural posture, the Federal Circuit's patentable-subject-matter inquiry remained the same. In each case, the Federal Circuit focused on two main factors: (1) the claims' focus on specific improvements in computer functioning; and (2) the claimed processes' use of specific components, rules, or formats to achieve the improvement. The Court takes each in turn, summarizing the relevant claim language and holdings.

The most technologically analogous case is *Contour IP Holding LLC v. GoPro, Inc.*, 113 F.4th 1373 (Fed. Cir. 2024). In that case, the Federal Circuit reversed the district court's decision, which had found that the asserted claims were directed to the abstract idea of "creating and transmitting video (at two different resolutions) and adjusting the video's settings remotely." 113 F.4th at 1378. In walking through the

first step of the *Alice/Mayo* framework, the Federal Circuit stated that the claims were "directed to a technological solution to a technological problem." *Id.* at 1380. According to the Federal Circuit, the specification disclosed "improving POV camera technology through specific means of generating high- and low-quality video streams in parallel and transferring a low-quality video stream to a remote device, and the claims reflect this improvement." *Id.* In concluding that the claims were directed to patentable subject matter, the Federal Circuit admonished the district court for "characteriz[ing] the claims at an impermissibly high level of generality." *Id.* at 1379–80.[3]

After *Contour IP Holdings*, the next most technologically analogous case dealt with an improvement in the functioning of computer networks, *SRI Int'l v. Cisco Sys.*, 930 F.3d 1295 (Fed. Cir. 2019). In *SRI*, the claims sought to solve the problem of detecting security threats when "[t]he number of login attempts for each computer may be below the threshold to trigger an alert." 930 F.3d at 1300. The Federal Circuit agreed with the district court's assessment that "the claims are more complex than merely reciting the performance of a known business practice on the Internet[.]" *Id.*

[3] The Federal Circuit has repeatedly admonished district courts for over-abstracting claims when performing a Section 101 analysis. For example, in *Enfish, LLC*, the claims were focused on a "self-referential table for a computer database." 822 F.3d at 1336. The district court there found that the claims "were directed to the abstract idea of 'storing, organizing, and retrieving memory in a logical table,'" which it further abstracted as "the concept of organizing information using tabular formats." *Id.* at 1337. In finding these claims were not directed to an abstract idea, the Federal Circuit chided the district court for "describing the claims at such a high level of abstraction." *Id.* at 1336. What was important to the Federal Circuit was that "the plain focus of the claims is on an improvement to computer functionality itself[.]" *Id.* at 1337.

at 1303. Rather, the claims were "using a specific technique—using a plurality of network monitors that each analyze specific types of data on the network and integrating reports from the monitors—to solve a technological problem arising in computer networks: identifying hackers or potential intruders into the network." *Id.*

Finally, in *McRO, Inc.*, the patents at issue were directed to automating "a 3-D animator's tasks, specifically, determining when to set keyframes and setting those keyframes." 837 F.3d at 1307. The Federal Circuit found that the patent was "focused on a specific asserted improvement in computer animation, i.e., the automatic use of rules of a particular type." *Id.* at 1314. Although the claim used a general-purpose computer, the Federal Circuit found the claim patentable because it was used to "perform a distinct process to automate a task previously performed by humans," *id.* at 1314, which employed "a combined order of specific rules" to "render[] information into a specific format[,]" *id.* at 1315.

Two key takeaways emerge from these cases: (1) similar computer-implemented claims have been found patentable when the claimed improvements and methodologies are sufficiently specific; and (2) over-abstraction of a claimed invention when analyzing patentability under Section 101 is improper.

B. Federal Circuit Precedent: Directed to Abstract Idea

For comparison, the Court now reviews Federal Circuit decisions in which patents were found to be directed to abstract ideas: *Two-Way Media*, *Adaptive Streaming*, *Affinity Labs*, and *In re Board of Trustees of Leland Stanford Junior University*. As with the cases in the above section, the procedural posture did not alter

the Federal Circuit's analysis. The Court therefore reviews these cases in order of technological similarity.

The most analogous technology was at issue in *Two-Way Media*, which analyzed claims to "a system for streaming audio/visual data over a communications system like the internet," that applied "an improved scalable architecture for delivering real-time information." *Two-Way Media Ltd v. Comcast Cable Commc'ns., LLC*, 874 F.3d 1329, 1333 (Fed. Cir. 2017). The Federal Circuit held that the relevant claim was unpatentable because it "require[d] the functional results of 'converting,' 'routing,' 'controlling,' 'monitoring,' and 'accumulating records'" without "sufficiently describ[ing] how to achieve these results in a non-abstract way." *Id.* at 1337. And in rejecting certain counterarguments from the patentee, the Federal Circuit noted two other deficiencies with the relevant claims: (1) "the use of generic components to carry out the recited abstract idea" was insufficient to render the claims patentable; and (2) although the patent disclosed an allegedly improved "scalable network architecture," it failed to show how this architecture "leads to an improvement in the *functioning* of the system." *Id.* at 1338.

Another case evaluating claimed improvements in video streaming is *Adaptive Streaming*, which concerned claims directed to "systems that can receive a video signal in one format and broadcast it to at least one device calling for a different format." *Adaptive Streaming Inc. v. Netflix, Inc.*, 836 F.App'x 900, 901 (Fed. Cir. 2020). The Federal Circuit found that the asserted claims there were directed to the abstract idea of "collecting information and transcoding it into multiple formats." *Id.*

at 903. The court stated that "the claims and written description make clear that the focus of the claimed advance is the abstract idea of format conversion, from an incoming signal's format to a variety of formats suited to different destination devices." *Id.* In rejecting the asserted claims at step 1, the Court also noted that "[t]he focus" of the claims was "not any specific advance in coding or other techniques for implementing that idea; no such specific technique is required." *Id.*

A similar, but slightly less analogous improvement was evaluated in *Affinity Labs,* which concerned claims "directed to streaming regional broadcast signals to cellular telephones located outside the region served by the regional broadcaster." 838 F.3d at 1255. In essence, the representative claim recited a system in which a cellphone had a display and could download and use an application that "request[ed] and receive[d] network-based content from the broadcaster[.]" *Id.* at 1256. The Federal Circuit held that "[t]he concept of providing out-of-region access to regional broadcast content is an abstract idea," because "[i]t is a broad and familiar concept concerning information distribution that is untethered to any specific or concrete way of implementing it." *Id.* at 1258. The *Affinity Labs* court took particular issue with the claims' breadth: they were not limited "to any particular technology" and attempted to claim "the function of wirelessly communicating regional broadcast content to an out-of-region recipient, not a particular way of performing that function." *Id.* The court also looked to the specification, which "underscore[d] the breadth and abstract nature of the idea embodied in the claims" *Id.* at 1259.

In short, the Federal Circuit has found claims with the following characteristics to be directed to abstract ideas: (1) claims that can be distilled to some process of collecting, manipulating, distributing, and displaying data; (2) claims that merely add a general computer to a mathematical or conventional process; and (3) claims that fail to clearly delineate what improvement they make to the functioning of computers or computer systems.

* * *

From this subset of Federal Circuit precedent, the Court draws the following conclusions:

- A claim is more likely to be found patentable when it (1) focuses on a specific improvement in the functioning of computers or computer systems; and (2) embodies a specific set of components, rules, or steps to achieve that improvement. *See, e.g.*, *McRO, Inc.*, 837 F.3d at 1314–15.
- District courts should avoid over-abstracting claims when deciding whether they are directed to abstract ideas. *See, e.g.*, *Contour IP Holdings*, 113 F.4th at 1379–80; *Enfish*, 822 F.3d at 1336–37.
- Claims related to merely collecting, manipulating, distributing, and displaying data are likely directed to abstract ideas. *See, e.g.*, *Adaptive Streaming*, 836 F.App'x at 903.
- Claims that fail to tie the claimed method to a concrete improvement in computers or computer functioning are likely to be abstract. *Two-Way Media*, 874 F.3d at 1338.

C. Application of Federal Circuit Precedent to the '372 Patent

Against this precedential backdrop, the '372 Patent passes the Section 101 eligibility inquiry. The Asserted Claims are not directed to (1) general data manipulation and display or (2) the computer-implementation of mathematical or

conventional processes. *See supra* Part III.B. Nor does the '372 Patent fail to explain how the claimed invention improves computer systems.

Quite the opposite. The '372 Patent is directed to a faster, more reliable, and more efficient computer network—a specific improvement to the functioning of a computer system. *See supra* Part III.A. Put differently, the asserted claims "are better understood as being necessarily rooted in computer technology in order to solve a specific problem in the realm of computer networks." *SRI*, 930 F.3d at 1303. Because the '372 Patent claims a concrete improvement to the functioning of a computer network and specifies particular steps and methods to achieve that improvement, it is not directed to an abstract idea.

i. Analysis of the '372 Patent's claimed improvement and method

The claimed invention improves computer networks by reducing network congestion and improving the reliability of multicasting live data streams. '372 Patent at 4:9–11, 29–31 (describing invention as managing "available bandwidth to allow for fair or equal division among the streams" and the "delivery of packets including an option for guaranteed delivery" through an overlay multicast system).

Although Section 101 eligibility ultimately depends on the claim language, the Court may still look to the specification to shed light on what "the problem facing the inventor" was and what the patent describes as the "invention." *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 767 (Fed. Cir. 2019). The specification for the '372 Patent identifies the problem as successfully multicasting data packets to many receivers simultaneously "to successfully realize a live video broadcast[.]" '372 Patent

at 1:53–55. The specification suggests that the cause of this problem was general industry practice: "A video stream is transmitted at a fixed high rate and not all parts of the network are likely to have sufficient bandwidth available to forward the stream." *Id.* at 1:55–58. As a result, "[w]hen a bandwidth bottleneck is reached, the router discards the packets that cannot immediately be forwarded." *Id.* at 1:59–61.

Two problems arise from discarding packets. First, "[t]he data stream that is eventually received by one or more receivers further down the network is corrupt and the congestion also has a negative impact on communication sessions of other nodes that communicate through the bottleneck router." *Id.* at 1:61–65. To avoid this problem, one solution was to "find a transmission rate that is supported by all parts of the network." *Id.* at 1:65–2:1. But this solution is impractical because this rate is always in flux—the internet is available to anyone with an internet-connected device. *Id.* at 2:1–2. So in practice, "[a] transmission rate [wa]s selected and the packet loss [wa]s accepted," causing the data stream to suffer a certain level of packet loss when certain routers became overloaded. *Id.* at 2:2–5. Second, and more fundamentally, certain live data streams cannot accept *any* packet loss. *Id.* at 2:12–13. While "audio and video data can usually withstand some packet loss without becoming too corrupted to play," the specification notes that "[r]eal-time financial data" could "become useless and even dangerous to use if random packets of trades are lost." *Id.* at 2:14–20.

The claims and specification set forth how the claimed overlay multicast system solves these problems by improving the efficiency of the internet network. To

avoid corrupted streams, for example, the specification teaches an enhanced form of layered multicast "that guarantees complete delivery for certain layers to avoid random loss altogether, making it suitable for certain types of critical data such as market data." *Id.* at 5:22–25. The specification states that "[t]he system is characterized as controlling two primary activities." *Id.* at 5:26–27. First, it runs and manages "a robust and scalable overlay network that uses its own routing algorithms and supports multicast[.]" *Id.* at 5:27–29. Second, it manages "flow control and congestion when live streams overload the network and ensur[es] layered multicast can be offered with guarantees." *Id.* at 5:29–32.

The claims capture how this system improves the functioning of a video router. For example, Claim 1 recites "a layered video data stream including a base layer and a set of enhancement layers."[4] The base layer is forwarded by the router to at least two video receivers. Thus, the claim language captures how delivery of a certain layer (i.e., the base layer) is guaranteed to avoid random loss of this layer. The specification provides an embodiment of this improved system:

> In one embodiment of the overlay multicast system, priority numbers are associated with data packets. The priority numbers represent a logical layer inside a data stream. Data provided by a multicast application may be in the form of a stream of data. This data is subdivided into categories or priorities based on the nature of the data.

[4] Cisco argues that claim 6 is a representative claim. (Dkt. #44 at 17). SVC disagrees, countering that Cisco has failed to provide evidence to support its contention. (Dkt. #50 at 13). According to SVC, independent claims 1 and 11 recite a "video router" and a "scalable video coding router," which claim 6 lacks. (Dkt. #50 at 14). Although claim 6 recites "an internet protocol network between *a video router* and a plurality of video receivers," the Court finds that claim 1 is more representative of the independent claims. But even if the Court were to find claim 6 to be representative, it would still reach the same conclusions it reached below by using claim 1 as a representative claim.

> When packets in a data stream are labeled with priorities in the range 0 to 3, the stream is said to have 4 layers. Also, the convention is to treat 0 as the highest priority and 3 as the lowest. Any other system of identifying priority levels may be utilized including alpha numeric indicators or similar identifiers. If a stream only contains a single layer, all packets are labeled with priority 0.

Id. at 21:25–37. Claim 1 also recites that the router identifies "bandwidth-limited conditions of an internet protocol network between the video router and a plurality of video receivers." The router then "selectively forward[s] one or more of the set of enhancement layers, but fewer than all of the set of enhancement layers, to at least two of the plurality of video receivers through the internet protocol network based upon the identified bandwidth-limited conditions." The specification also describes an embodiment of this improvement:

> In one embodiment, knowing that routers will use the packet priority numbers when making forwarding selections on congested parts of the network, a source carefully divides its data packets over different layers or priorities, in a way that a subset of the layers still contain a useful, uncorrupted representation of the data. This system is especially useful when multicasting a live data stream with a high data rate to a large number of receivers, scattered over a heterogeneous wide area network. Receivers that are on congested parts of the network will then receive the highest priority parts of the data only. *This eliminates the need to lower the publishing rate to match the slowest receiver, while still being able to offer live, uncorrupted, thinned data streams to clients suffering from insufficient bandwidth.* Example applications of the system include audio and video codecs that divide live multimedia content over layers to enhance the user experience over wide area networks.

Id. at 21:38–22:2 (emphasis added). In short, the specification discloses how the claims eliminate the need to lower the publishing rate to match the slowest receiver. Likewise, the specification states how the claims "enforce the fair allotment of bandwidth between data streams," and also "implement[] the prioritization of logical

layers by dropping lower priority level layers when congestion occurs." *Id.* at 22:62–65. Thus, the claim language, combined with the specification, captures how the claimed invention manages flow control and congestion when live streams overload the network and further ensures that layered multicast can be offered with guarantees. To summarize, the Asserted Claims are directed to a specific improvement to a computer network, achieved through a specific method, that solves a specific problem experienced by the industry at the time of the invention.

ii. Cisco's arguments and cited authority

Cisco argues that the claims of the '372 Patent are directed to nothing more than the abstract concept of adjusting the amount of video information transmitted to a router based on bandwidth. (Dkt. #44 at 8). According to Cisco, "[t]he abstract idea of prioritizing information based on bandwidth is age-old and a basic human process." (Dkt. #44 at 8). As an initial matter, the Court finds that Cisco's abstraction runs afoul of the Federal Circuit's admonitions about over-abstracting inventions to an impermissibly high level of generality. Indeed, such over-abstracting is "untethered from the language of the claims" and "all but ensures that the exceptions to § 101 swallow the rule." *Contour IP Holdings*, 113 F.4th at 1380 (citing *Enfish*, 822 F.3d at 1337). The Court thus refuses to analyze the claims at this level of abstraction.

Setting that aside, the Court reads Cisco's principal argument to be that all the elements of claim 6 are "conventional." (Dkt. #44 at 16–18); (Dkt. #57 at 5–9). In particular, Cisco points to the provisional application that the '372 Patent relies on—

U.S. Provisional App. No. 60/647,601 (the "'601 Provisional")[5] and argues that between the disclosures of this document and of the '372 Patent, all claimed components and techniques were well-known and conventional. (Dkt. #44 at 11). These components include "multicast streaming video on the Internet," "dividing a multicast stream into multiple layers," and "selectively forwarding layers of a video stream to receivers based on a condition in the network." (Dkt. #44 at 11–12).

To be sure, some of these components were known before the '372 Patent's priority date. But in general, Cisco's characterizations that certain techniques were "well-known and conventional" are not well taken. Take Cisco's last point—that selectively forwarding layers was known in the art. In support, Cisco cites to a line in the '601 Provisional that merely states this "was an 'active area of research,'" claiming that this classification amounts to a concession that the practice was conventional. (Dkt. #44 at 11).

To characterize this as a "concession" is misleading, at best. In fact, the Court reads this statement to mean the opposite: an active area of research is likely not an area with well-settled, conventional solutions. Indeed, that's why it remains an area of research. Because such an area likely lacks any conventional solution, the Court does not credit this throw-away line as the concession Cisco claims it to be.

[5] The Court takes judicial notice under Fed. R. Evid. 201 of the '601 Provisional, (Dkt. #44-2), because it is part of the '372 Patent's prosecution history and is a matter of public record. *See Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1008 n.2 (Fed. Cir. 2018) ("On a motion for judgment on the pleadings, however, the court may consider 'matters of public record.' Prosecution histories constitute public records." (internal citations omitted)).

Cisco's remaining arguments fare no better. True, the '601 Provisional acknowledges previous research in "application layer multicast solutions." (Dkt. #44 at 11). But the '601 Provisional also goes on to say, "The fact that new initiatives continue to emerge illustrates the difficulty of solving multicast on packet-switched networks in a generic way." (Dkt. #44-2 at 8). Moreover, the '601 Provisional distinguishes the then-disclosed prototype of the claimed system—Terracast—from the art: "Although Terracast has many similarities with existing solutions, its specific focus on scalability and live data lead to a design that distinguishes itself from related work on a number of important points." (Dkt. #44-2 at 8). And because "Terracast combines two research subjects," the application notes, "it is difficult to find comparable, existing solutions." (Dkt. #44-2 at 9). All in all, what Cisco points to as proof of conventional, well-known solutions in the art, the Court reads as evidence of a continued need for technological innovation in the field. Without more, these arguments fail.

But even if the Court were to accept Cisco's characterization that all the elements of claim 6 were "conventional," that would not end the matter. The Federal Circuit has held that "conventional" components can nevertheless provide a technological advantage to satisfy step one. *Contour IP Holdings*, 113 F.4th at 1380 ("[The use of] known or conventional components that existed in the prior art at the time of the invention . . . *alone* does not necessarily mean the claim is directed to an abstract idea at *Alice* step one.") (collecting cases).

Finally, Cisco believes that this Court's holding in *Orostream LLC v. ABS-CBN Int'l* mandates that the Court find the Asserted Claims unpatentable. No. 2:15-CV-248, 2015 WL 5836949 (E.D. Tex. Oct. 1, 2015). In that case, this Court found that a claim directed to "computer-implemented systems and methods for transferring information efficiently" was unpatentable. *Id.* at *1. Seeking to show why *Orostream* governs here, Cisco generated the below chart comparing the claim language at issue there with the language of claim 6 of the '372 Patent:

'372 patent Claim 6	**Invalid claim 37 of the '837 patent in *Orostream***
6. A method for transmitting video signals, the method comprising:	A method of transferring target information packets while minimizing additional communication delay between a user node and a master node comprising the steps of:
receiving a layered video data stream comprising a base layer and a set of enhancement layers;	
identifying bandwidth-limited conditions of an internet protocol network between a video router and a plurality of video receivers;	**monitoring length of time necessary for transfer of each target information packet; and**
forwarding the base layer to at least two of the plurality of video receivers via the internet protocol network; and	
selectively forwarding one or more of the set of enhancement layers, but fewer than all of the set of enhancement layers, to at least two of the plurality of video receivers through the internet protocol network based upon the identified bandwidth-limited conditions;	**adjusting the rate of target information transfer in response to the monitored transfer time.**
wherein the layered video data stream is transmitted according to an internet protocol; and wherein each layer of the layered video data stream comprises data packets, each of which is encoded with a sequence number and a layer identifier, and wherein the layer identifier for each data packet is based upon a layer to which the packet belongs.	

(Dkt. #44 at 20–21) (citing *Orostream*, 2015 WL 5836949 at *1). Because the '372 Patent similarly uses only "result-based functional language," and because the

remaining details of claim 6 do not cure its abstractness, Cisco concludes that the claims here should similarly be held to be unpatentable. (Dkt. #44 at 21–22).

The Court disagrees. A quick review of the claim language reveals why: specificity. The claim in *Orostream* was directed to "the abstract idea of adjustment of the rate of information transfer based on feedback." *Orostream*, 2015 WL 5836949, at *3. The claim imposes no limits on the type of information being conveyed. Nor does the claim limit which network segment must be used to convey the information. Simply put, the claim in *Orostream* is broad, non-specific, and describes only the end function of the claimed invention.

By contrast, claim 6 describes the use of a specific data-packet prioritization system that ensures all subscribing receivers are sent at least a "base layer" of a given "video data stream." When bandwidth conditions allow, certain "enhancement layers" may also be sent to some or all of those receivers. These layers are sent specifically "through the internet protocol network." In short, the claims at issue here, unlike the claim in *Orostream*, are directed to a specific, concrete improvement in the functioning of a computer network (guaranteed receipt of the base layer of a video stream) that uses particular methods (data-packet prioritization) to achieve that improvement. The type of data being transferred (video data) and where the transfer occurs (the internet protocol network) are similarly specific. Thus, the claim in

Orostream is factually inapposite to the claims of the '372 Patent, and the Court's holding and reasoning there do not apply here.[6]

In sum, the Court concludes that the Asserted Claims are directed to an improvement in computer networks. By managing bandwidth limitations through an overlay network with prioritization layering, the resulting network is faster, more reliable, and more efficient for multicasting data streams. Accordingly, the claims are not directed to an abstract idea, and Cisco has failed to prove by clear and convincing evidence that the claims are invalid under Section 101.

IV. CONCLUSION

It is therefore **ORDERED** that Defendant's Motion to Dismiss, (Dkt. #44), is **DENIED**.

So ORDERED and SIGNED this 2nd day of April, 2025.

SEAN D. JORDAN
UNITED STATES DISTRICT JUDGE

[6] To the extent the Court does not address any other authorities relied upon by Cisco, the Court finds them nonbinding, factually inapposite, or otherwise unpersuasive.